AIR-CONDITIONING
& REFRIGERATION
INSTITUTE

Representing Manufacturers
of Heating, Ventilating,
Air-Conditioning and
Refrigeration Products

July 12, 2004

Mr. Michael Martin
California Energy Commission
1516 Ninth Street
Sacramento, CA 95814

Re: Docket No. 03-AAER-1

Dear Mr. Martin:

The Air-Conditioning and Refrigeration Institute (ARI) submits these written comments on the California Energy Resources Conservation and Development Commission (CEC) proposed amendments to the appliance efficiency regulations Title 20.

ARI is a North American trade association representing the manufacturers of over 90% of U.S. produced air conditioning and commercial refrigeration equipment. ARI represents a domestic industry of approximately 200 air conditioning and refrigeration companies, employing approximately 150,000 men and women in the United States. The total value of member shipments by these companies is over $30 billion annually. We have reviewed the proposed amendments to the appliance efficiency regulations and would like to make the following comments.

Very Large Packaged Air-Cooled Commercial A/C (240-760 kBtu/h)

The analysis used to justify the proposed standards is flawed in many respects. First, the incremental cost was extrapolated from cost data that is yet to be finalized by the Department of Energy (DOE), but most importantly, which is based on a 15 ton unit. Cost is not a linear function of tonnage and/or EER and cannot be extrapolated. Second, ACEEE looked at several cost analyses; all done on much smaller equipment but conveniently ignored the ASHRAE 90.1 analysis, which to our knowledge is the only analysis that looked at 30-ton products. Based on the ASHRAE 90.1 cost figure, the incremental cost at a 10 EER unit is not $504 as claimed by ACEEE but is five times greater or $2,724. Third, the discount rate of 3% is unrealistically low and does not reflect future expectations as expressed by nationally recognized indices, such as the producer price index. A more appropriate discount rate is around 6 to 7%. The LBNL analysis that ACEEE consulted estimated the discount rate for commercial air conditioner customers at 6.1%. The CEC has not provided any economically justifiable support for using a 3% discount rate. Correct incremental cost of the equipment and discount rate demonstrate that the proposed standards are not economically justified as required by California law.

Contrary to what ACEEE stated in the report, the 0.2 EER deduction is not new at all and has been used by ASHRAE 90.1 since at least 1989. In addition, it is also used by the CEC in its Title 20 regulations for water-cooled and evaporatively cooled products and in Title 24 for all air-cooled products above 65,000 btu/h (including products above 240,000 btu/h). The 0.2 EER deduction has been used by ASHRAE and others to account for additional losses (pressure drops) resulting from the gas heating element. We urge CEC to be consistent with its own regulations and to adopt the 0.2 EER deduction for products above 240,000 btu/h as well.

The effective date of 2006 does not allow sufficient time for manufacturers to redesign their products and retool their production lines. Nor would it be technically and financially feasible for manufacturers to redesign products and retool production lines twice in 6 years. Given that the HVAC industry will go through significant product redesign due to the phase-out of R-22 in 2010, a logical effective date for any new standards should be January 1, 2010, and nothing sooner. ARI supports a federal standard at 10/9.8 EER effective January 1, 2010, but strongly opposes the two-tiered standards proposed by CEC and in particular the 10.5 EER.

Residential Furnace Air Handler

The residential air handler fan as defined by CEC is an integral part of a residential furnace, which is a "covered product" under the Energy Policy and Conservation Act (EPCA) As such, the CEC is preempted from regulating the energy consumption of residential furnace air handlers. It is a violation of the US District Court's order for the CEC to restrict the sale of furnaces in the state of California based on the fan's electrical consumption. Therefore, we urge CEC to remove this requirement from Title 20.

Commercial Packaged Refrigerators/Freezers

The proposed standard for cabinets without doors is totally arbitrary and is technically invalid. How could CEC technically justify an efficiency standard at the same level as reach-in cabinets with transparent doors, when the system without door is inherently less efficient? This is like requiring trucks to be held to the same fuel efficiency standards as small cars. It does not make sense. In addition, how could CEC promulgate standards based on only 2 units in its database, one of which could not even meet the levels?

Most importantly, for cabinets without doors, the most important physical dimension is the "Total Display Area" or TDA and not the volume as it is the case for cabinets with doors. This is recognized in several standards including ISO 23953, ARI 1200 and the newly revised ASHRAE 72. Consequently, any efficiency standard should be correlated with respect to TDA and not volume. We recommend that CEC postpone setting standards for these products until it studies the issue further and have data to support the levels.

The CEC proposed standards lumps all types of reach-in cabinets together without taking into account that some beverage merchandisers are designed for rapid pull down temperatures. These beverage merchandisers have oversized compressors and heat exchangers and as such are not as efficient. We ask that CEC sets a separate product

class for beverage merchandisers specifically designed for pull down temperature applications.

Regarding the test procedures, we would like to bring to the attention of the CEC that ARI standard 1200 provides for the rating and testing of closed and open refrigerators and freezers. ARI 1200 makes reference to ASHRAE 72 and 117 for the test procedures of open and closed commercial refrigerators/freezers respectively. We urge CEC to adopt ARI 1200 as the test procedures for all commercial refrigerators and freezers.

Commercial Icemakers

A look at the ARI directory of commercial icemakers quickly shows that the proposed standards would eliminate 80% of the products listed. In some product categories such as water-cooled ice-making head, only a very limited number of models are available, and from only two manufacturers.

It is clear that the proposed efficiency standards are very stringent and will require major redesign of entire product lines. It is also clear that the proposed effective date of January 1, 2007 is not realistic and does not provide sufficient time for manufacturers to be ready for the new standards. Given that manufacturers will be required to redesign entire product lines to meet the January 1, 2010, phase-out date of R-22, ARI urges CEC to postpone the effective date of the standard until January 1, 2010.

Finally, ARI noticed that the annual sales of icemakers in the state of California (23,000 units) have been significantly overestimated. Consequently, the energy savings have been overestimated as well. ARI is willing, upon an official request from the CEC and on a confidential basis only, to share shipment data with the Commission.

Walk-in Coolers (Refrigerators) and Freezers

ARI does not believe that prescribing prescriptive standards is the best option to reduce the energy consumption of walk-ins. We are opposed to prescriptive standards because they are incompatible with innovations. The design of walk-ins or any other equipment for that matter should be left to manufacturers. The CEC should be concerned with performance standards only. Consequently, we strongly recommend that the CEC postpone the implementation of a prescriptive standard for walk-ins until a performance standard is developed.

Federal Preemption

All Title 20 regulations as they apply to “covered products” and “covered equipment” as defined by EPCA are expressly preempted by federal law. This was reinforced by the U.S. District Court for the Eastern District of California. However despite EPCA’s express preemption and the Court’s ruling, CEC is promulgating marking and information disclosure requirements for “covered products”. The proposed amendments

to Title 20 do not address these fundamental flaws and do not resolve the issue of federal preemption. We urge CEC to comply with the court's order.

We appreciate the opportunity to submit these comments. If you have any questions regarding this submission, please feel free to contact me.

Sincerely,

Karim Amrane
Director, Public Policy
Tel: 703/524-8800 ext.307
Email: kamrane@ari.org